



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,165	04/19/2004	Tung-Wei KAO	LITP0034USA	3164
27765	7590	12/14/2005		
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				
			EXAMINER PATEL, DHARTI HARIDAS	
			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,165

Applicant(s)

KAO ET AL.

Examiner

Dharti H. Patel

Art Unit

2836



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

1. Claims 1-4 and 6-12 are rejected under 35 U.S.C. 102 as being unpatentable over the acknowledged prior art. With respect to claim 1, applicant's prior art (Fig. 1) teaches an electrostatic discharge protection circuit for receiving an electrostatic discharge current generated by a first printed circuit board 200 and conducted to a first grounding line 220 of the first printed circuit board, the electrostatic discharge protection circuit comprising a flexible cable 300 comprising a connecting line 320 having one end connected to the first ground line 220; and a second printed circuit board 100 comprising a fixed component 110; an electrostatic discharge protection path electrically connected between another end of the connecting line 320 and the fixed component 110; and a second grounding line 120 electrically connected to the fixed component 110 as disclosed Fig. 1.

With respect to claim 2, applicant's prior art teaches an electrostatic discharge protection circuit wherein the fixed component is a screw 110 as disclosed in the Specification, Page 3, line 1.

With respect to claim 3, applicant's prior art teaches an electrostatic discharge protection circuit wherein the first printed circuit board 200 is fixed on a

tray of an optical disk drive and the second printed circuit board 100 is fixed in a housing of the optical disk drive as disclosed in the Specification, Page 2, lines 3-6.

With respect to claim 4, applicant's prior art further teaches that the optical disk drive is a slim optical disk drive as disclosed in the Specification, Page 2, line 4.

With respect to claim 6, applicant's prior art teaches that the flexible cable 300 is a U-shaped flexible cable as disclosed in the Specification, Page 2, lines 7-8.

With respect to claim 7, applicant's prior art teaches an electrostatic discharge protection circuit for receiving an electrostatic discharge current generated by an electric appliance comprising a fixed component 110; and an electrostatic discharge protection path on a circuit board 100 for receiving the electrostatic discharge current and conducting the electrostatic discharge current to the fixed component 110 directly (grounding lines 120 of the circuit board and ground lines 220 of the electric appliance of circuit board 200 are electrically connected via a connecting line 320 of the flexible cable 300. This illustrates a direct path to ground).

With respect to claim 8, applicant's prior art teaches that the electrostatic discharge protection circuit further comprises a flexible cable 300 connected between the electric appliance (of circuit board 200) and the circuit board 100,

wherein the flexible cable 300 comprises a connecting line 320 for conducting the electrostatic discharge current to the circuit board 100 as disclosed in Fig. 1.

With respect to claim 9, applicant's prior art teaches that the flexible cable 300 is a U-shaped flexible cable as disclosed in the Specification, Page 2, lines 7-8.

With respect to claim 10, applicant's prior art teaches an electrostatic discharge protection circuit wherein the fixed component is a screw 110 as disclosed in the Specification, Page 3, line 1.

With respect to claim 11, applicant's prior art teaches an electrostatic discharge protection circuit wherein the electric appliance (of circuit board 200) is fixed on a tray of an optical disk drive and the circuit board 100 is fixed in a housing of the optical disk drive as disclosed in the Specification, Page 2, lines 3-6.

With respect to claim 12, applicant's prior art further teaches that the optical disk drive is a slim optical disk drive as disclosed in the Specification, Page 2, line 4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2836

2. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art. With respect to claim 5, it is well known in the art that a wider discharge path for ESD is advantageous because it allows a greater amount of energy to be dissipated to ground quickly, versus that which a narrower channel would be able to accommodate. This is true for all electrical paths (the greater the width of the conductor the lower the resistance to current flow).

With respect to claim 13, it is well known in the art that a wider discharge path for ESD is advantageous because it allows a greater amount of energy to be dissipated to ground quickly, versus that which a narrower channel would be able to accommodate. This is true for all electrical paths (the greater the width of the conductor the lower the resistance to current flow). Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experiment. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dharti H. Patel whose telephone number is 571-272-8659. The examiner can normally be reached on 8:30am - 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800, Ext. 36. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DHP
12/07/2005

A handwritten signature in black ink, appearing to read 'Phuong T. Vu', with a long horizontal flourish extending to the right.

PHUONG T. VU
PRIMARY EXAMINER